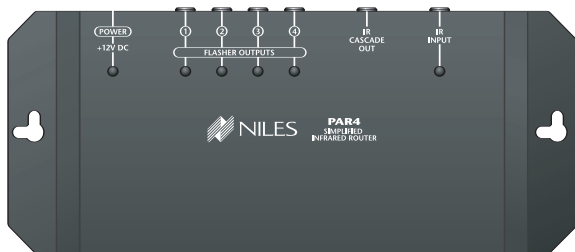


INSTALLATION & OPERATION GUIDE



PAR4

SIMPLIFIED INFRARED ROUTER



PAR4

Simplified Infrared
Router

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Introduction

An infrared router enables you to control identical audio/video components independently of each other. This allows you to incorporate multiple CD changers, DSS receivers, televisions, etc. of the same make and model into a home entertainment system and control them individually.

Installed in the equipment location, the PAR4 is connected to your infrared (IR) extender system and turns pre-specified "routes" on and off, passing infrared commands to a single component or group of components.

The PAR4 is compatible with all current Niles infrared Main System Units (MSUs). It may be used along with the MSU140, MSU250, MSU480 and the MSU440Z.



Features and Benefits

The PAR4 offers a number of improvements over other IR routers:

- Universal system – compatible with virtually all brands of A/V equipment and remote controls
- Routes IR commands to four components
- Simple plug and play operation
- No programming – simply select the route needed from an existing list of IR commands
- Expandable – cascade two units together to create eight routes
- Printed circuit board design assures high reliability
- Low profile and small footprint with integrated mounting wings that allow for both horizontal and vertical installation
- UL listed regulated in-line power supply with universal voltage capability
- Two year parts and labor warranty

SIMPLIFIED INFRARED ROUTER

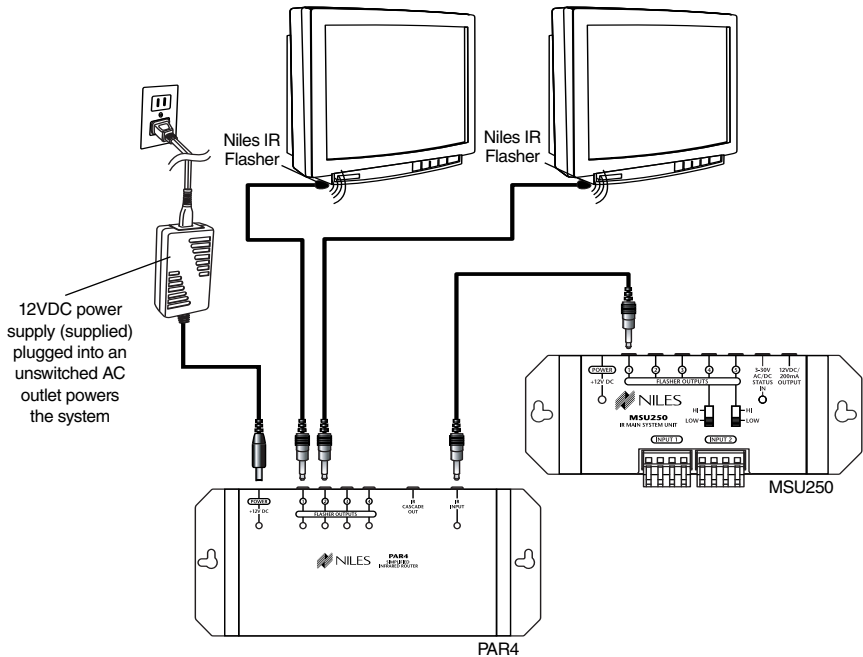
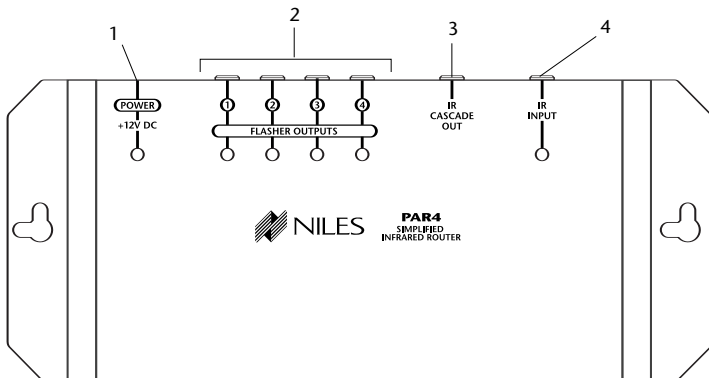


Figure 1
Diagram of PAR4 connecting to the flasher output of a MSU250 with flasher outputs controlling devices.

PAR4 Parts Guide



1. 12V DC Jack – Provides 12 volt DC power to PAR4 via a regulated power supply
2. IR Route (Flasher) Outputs – 3.5mm jacks provide output for single low-level flashers
3. Cascade Output – 3.5mm jack provides for connection of second PAR4
4. IR Input – 3.5mm jack provides for connection from the IR flasher output of a Niles Main System Unit

Installation Considerations

Placement of the PAR4

Place the PAR4 conveniently close to the main system unit it will connect to. Generally, the PAR4 is placed in a concealed location because its indicator lights are only used during installation. Placement possibilities include:

1. Table-top (on the floor or shelf behind the equipment) (Figure 2).
2. Wall-mount (affixed to the back of the equipment cabinet or a nearby wall) (Figure 3).

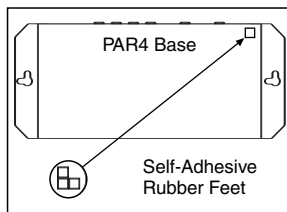


Figure 2: Table-top placement
Affix the enclosed self-adhesive rubber feet to the base of the PAR4.

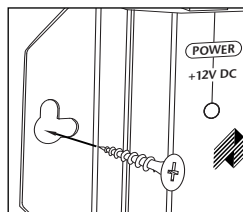


Figure 3: Wall-mount placement
Use sheetrock screws.

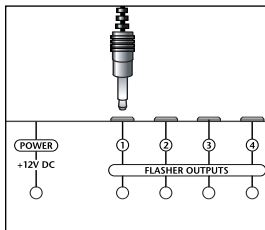
Installation Considerations (continued)

Before you begin, make sure that the flasher cables and the 12VDC power supply cable will all reach the proposed location of the PAR4. Mark the cables with labels describing where the cable originates (i.e. TV1) rather than which terminal on the PAR4 it should connect.

STEP	DESCRIPTION
1. Connect and test the power supply.	<p>A) Plug the supplied 12VDC power supply into an unswitched 100-240V AC outlet.</p> <p>B) Plug the connector into the socket labeled “power” on the PAR4.</p> <p>C) If the power LED on the PAR4 does not light, test the unswitched AC outlet with another appliance. If the outlet tests OK, you have a defective power supply which must be replaced before you continue. If the red power LED illuminates unplug the connector from the power socket and proceed.</p>
2. Plug the flashers (not supplied) into the flasher outputs. See figure 4.	<p>A) Recommended flashers are Niles MF1 or MF1VF MicroFlashers. If you need to extend the wire, use 2 conductor, 16 gauge stranded wire.</p> <p>B) When extending the flasher wire be sure to observe proper polarity.</p> <p>C) The wire marked with the grey stripe is positive (+); the unmarked lead is negative (-).</p>
3. Connect the PAR4 to the IR main system unit using a 3.5mm mono cable of appropriate length. See figure 1.	<p>A) Plug one end of the cable into the IR output of the main system unit (a flasher output on any Niles MSU).</p> <p>B) The other end of the cable is plugged into the jack labeled “IR Input” on the PAR4.</p> <p>C) During normal operation the blue IR indication LED will flicker when the PAR4 is receiving IR data from the output device.</p>

IMPORTANT

Make all final connections to the router before connecting the power supply. This will avoid potential damage to components.



BE SURE TO OBSERVE PROPER POLARITY WHEN EXTENDING THE FLASHER WIRE.

The wire lead marked with a gray stripe is positive (+); the unmarked lead is negative (-).

Figure 4

Operation

Operating the PAR4 is a simple matter of selecting the appropriate IR codes you need from a table of supplied code sets. See figure 5. The IR codes are available for download from the Niles Technical Support website:

<http://www.nilesaudio.com/techsupport>

1. On the Niles Technical Support website select the brand of remote control you will use to control the PAR4 (i.e. the Niles IntelliControl) and download the file for that remote control. After downloading the file you will need to import it into the programming software for the selected remote control.
2. From the supplied table select the route you wish to use (i.e. code 1: all four routes on) and load it into the remote control.
3. Test the code by operating the remote and observing the flasher LEDs on the PAR4. For example, if the “all on” command is issued, all four LEDs should illuminate indicating that all four routes are active.

S I M P L I F I E D I N F R A R E D R O U T E R

CODE	FLASHER 1	FLASHER 2	FLASHER 3	FLASHER 4
01	ON	ON	ON	ON
02	OFF	OFF	OFF	OFF
03	ON	OFF	OFF	OFF
04	OFF	ON	OFF	OFF
05	OFF	OFF	ON	OFF
06	OFF	OFF	OFF	ON
07	ON	ON	OFF	OFF
08	ON	ON	ON	OFF
09	OFF	ON	ON	ON
10	ON	ON	OFF	ON
11	ON	OFF	ON	ON
12	ON	OFF	OFF	ON
13	ON	OFF	ON	OFF
14	OFF	ON	ON	OFF
15	OFF	ON	OFF	ON
16	OFF	OFF	ON	ON

Figure 5: Table of IR Code Sets

Using Two PAR4 Routers

You may daisy chain two PAR4 IR routers together to provide routing for up to eight identical devices. This is accomplished by connecting two PAR4 routers together using a mono 3.5mm cable (not supplied). See figure 6. On PAR4 “B” the 3.5mm cable is plugged into the “IR cascade out” jack. On PAR4 “A” the 3.5mm cable is plugged into the jack labeled “IR input”.

Operation for two units is similar to operating a single PAR4 with the exception that a separate table of IR routing codes (table A and table B) exists for PAR4 **(A)** and PAR4 **(B)**.

Note: When two PAR4 IR Routers are daisy chained together codes from table A will not operate PAR4 unit B and vice versa.

Specifications

Unit Dimensions

7-1/16” wide x 1-1/4” high x 3” deep

Power Requirements

12VDC 1.25A regulated power supply (included).



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